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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BUSHEY, CHARLES S

ART UNIT PAPER NUMBER

1724

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/826,425

Applicant(s)

DURDA, DANIEL J.

Examiner

Scott Bushey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7-20-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because legal phraseology, i.e., "comprise", should be avoided in the abstract. Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of the following informalities: Page 8, line 6, "motor 128" should apparently be replaced by --motor 122--.

Appropriate correction is required.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference signs mentioned in the description: "102", as mentioned at page 5, lines 19, 20, and 22, page 6, lines 6 and 13, and page 7, lines 9 and 10; as well as "116", as mentioned at page 7, lines 9-11, and 13. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "136" has been used to designate both a flexible hose in Figures 1 and 2 and the primary propeller in Figures 2 and 3. Applicant should note the related discussion at page 7, line 23 and page 8, lines 4, 5, and 7. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 16, and 22-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16, "the second propeller" lacks antecedent basis.

In claim 22, line 2, the phrase "wherein the first is" should be replaced by -- wherein the first end is--. In line 4 of claim 22, a semi-colon should be inserted after "shaft".

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-8, 11, 12, 15, 20, and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by McWhirter et al '307 (Figs. 1, 4-6; col. 4, lines 2-14; col. 5, lines 44-55; col. 6, lines 11-25; col. 7, lines 33-36; Table I, Table II).

Applicant should note that with respect to instant claims 6-8, element (5) is considered to anticipate the second propeller, while with respect to instant claims 11, 12, and 15, element (5) is considered to anticipate the atomizer having plural blades.

9. Claims 22, and 29-32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Karliner (Figs. 2, 4, and 5; col. 4, lines 15-24, 64-67; col. 5, lines 1-10, 30-40; col. 6, lines 6-27).

Applicant should note that a recitation of the intended use, i.e., the claimed RPM range, of the claimed invention, as recited by instant claim 22, must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process, as in instant claims 29-32, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

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10. Claims 1-5, 9, and 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by WO 02/38510 A1 (Figs. 1 and 2; page 7, lines 4-11).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McWhirter et al '307.

McWhirter et al '307 (Table II, the sparger RPM column) substantially disclose applicant's invention as recited by instant claims 17-19, except for the specific recitation of applicant's desired operating rotating velocity range. The reference does clearly disclose operating the patented device at at least 657 RPM, which certainly approximates an end point of applicant's claimed range. It would have been obvious for an artisan at the time of the invention, to modify the drive means for the apparatus as taught by McWhirter et al '307, to allow for a slightly higher rotational drive speed, since such would have been dictated by the materials being worked on and the amount of agitation desired.

13. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karliner.

Karliner (Figs. 2, 4, and 5; col. 4, lines 15-24, 64-67; col. 5, lines 1-10, 30-40; col. 6, lines 6-27) as applied above substantially discloses applicant's invention as recited

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by instant claims 23 and 24, except for the specific drive motor used to achieve the desired operational speed. The reference does disclose that any electric motor typically having between 1 and 100 or more hp may be used to practice the disclosed invention and that the propeller system velocity of the reference apparatus is fully adjustable. Accordingly, it would have been obvious for an artisan at the time of the invention, to choose any known electric drive motor, including that as recited by instant claims 23 and 24, that would be fully adjustable and possess a level of hp that would clearly satisfy applicant's instant claims, in view of the all encompassing disclosure of the reference.

14. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karliner as applied to claim 32 above, and further in view of McWhirter et al '307.

Karliner (Figs. 2, 4, and 5; col. 4, lines 15-24, 64-67; col. 5, lines 1-10, 30-40; col. 6, lines 6-27) as applied above substantially discloses applicant's invention as recited by instant claim 33, except for the specific recitation that the first propeller has a diameter of between 16 and 20 inches.

McWhirter et al '307 (Impeller diameter column of Table I) discloses an apparatus similar to that of Karliner including a first propeller having a diameter of 18 inches. It would have been obvious for an artisan at the time of the invention, to optimize the size of the first propeller of Karliner to between 16 and 20 inches, in view of the teaching by McWhirter et al '307 to use an impeller diameter of 18 inches to achieve the desired agitation level of the liquid being worked on.

15. Claims 6-8, 11, 12, 14-21, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karliner taken together with WO 02/38510 A1.

Both references have been applied above and each substantially discloses applicant's invention as recited by the instant claims. In view of the above discussion, it would have been obvious for an artisan at the time of the invention, to provide the aerating apparatus as taught by Karliner with a submergible vortex control plate, in view of the teaching by WO 02/38510 A1, since such would insure a uniform contact of gas bubbles with the liquid being agitated by the propellers of the aerator.

16. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the reference combination as applied to claim 11 in paragraph 14 above, and further in view of either Rajendren '843 or Inhofer et al.

The reference combination as applied to claim 11 in paragraph 14 above, substantially discloses applicant's invention as recited by instant claim 13, except for the blades of the atomizer being curved.

Rajendren '843 (40 in Fig. 4) or Inhofer et al (240 in Figs. 13 and 16) disclose aerators similar to that of the reference combination as applied to claim 11 in paragraph 14 above, but wherein the atomizer blades are bent or curved, rather than straight. It would have been obvious for an artisan at the time of the invention, to modify the shape of the atomizer blades of the primary reference combination, in view of either of the alternative secondary references, since such would insure a better atomization of the gas bubbles by presenting a surface that is not parallel to the longitudinal flow of the gas bubbles from the hollow shaft of the aerator.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is 571 272-1153. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Scott Bushey
Primary Examiner
Art Unit 1724



6-20-05

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